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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,055	09/18/2006	Alexander Belyakov	P17721	3593

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EXAMINER
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CONTINO, PAUL F

ART UNIT	PAPER NUMBER
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2114

NOTIFICATION DATE	DELIVERY MODE
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12/12/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

krvuspto@ipmatters.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/599,055	<b>Applicant(s)</b> BELYAKOV ET AL.	
	<b>Examiner</b> PAUL F. CONTINO	<b>Art Unit</b> 2114	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10, 17-26 and 33-42 is/are pending in the application.
- 4a) Of the above claim(s) 11-16, 27-32 and 43-48 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 17-26 and 33-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION: Non-Final Rejection**

***Election/Restrictions***

1. During a telephone conversation between Janaki K. Davda (Reg. No. 40,684) and Examiner Camquy Truong on September 9, 2008, a provisional election was made without traverse to prosecute the invention of claims 1-10, 17-26, and 33-42. Affirmation of this election must be made by applicant in replying to this Office action. Claims 11-16, 27-32, and 43-48 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

2. The election/restriction requirement grouping presented to the Applicant is as follows:

Group I: Claims 1-10, 17-26, and 33-42: drawn to re-executing an operation in response to detecting a failing or error in an application: Class 714 / Subclass 16

Group II: claims 11-16, 27-32, and 43-48: drawn to distributing workload amongst operational computers: Class 718 / Subclass 105

***Specification***

3. The abstract of the disclosure is objected to because it must be a single paragraph of no more than 150 words. Correction is required. See MPEP § 608.01(b).

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4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The Examiner recommends including additional specifics regarding what or how failover and load balancing are being achieved.

### ***Information Disclosure Statement***

5. The information disclosure statement filed January 16, 2007, fails to comply with 37 CFR 1.98(a)(1), which requires the following: **(1) a list of all patents, publications, applications, or other information submitted for consideration by the Office;** (2) U.S. patents and U.S. patent application publications listed in a section separately from citations of other documents; (3) the application number of the application in which the information disclosure statement is being submitted on each page of the list; (4) a column that provides a blank space next to each document to be considered, for the examiner's initials; and (5) a heading that clearly indicates that the list is an information disclosure statement. The information disclosure statement has been placed in the application file, but the information referred to therein has not been considered. No listing of any documents is present in the Information Disclosure Statement.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 3-5, 17, 19-21, 33, and 35-37 are rejected under 35 U.S.C. 102(e) as being anticipated by McGowen (U.S. PGPub 2003/0140191).

As in claims 1 and 33, McGowen discloses a method and an article of manufacture in a computer system for failover when at least one of a first network adapter and a data path through the first network adapter fails, wherein the computer system includes a filter driver, and wherein the first network adapter is connected to a second network adapter (*Fig. 4; paragraphs [0006]-[0007]*), comprising:

receiving, with the filter driver, a path fail notification that at least one of the first network adapter and the data path through the first network adapter has failed (*paragraphs [0007] and [0034]*); and

rerouting, with the filter driver, packets directed to the first network adapter to the second network adapter (*paragraphs [0007] and [0063]-[0064]*).

As in claims 3 and 35, McGowen discloses determining, with the filter driver, a new data path including the second network adapter (*paragraphs [0006]-[0007] and [0063]-[0064]*).

As in claims 4 and 36, McGowen discloses receiving, with the filter driver, a notification that the first network adapter is restored (*paragraphs [0006]-[0007] and [0064]*); and

determining, with the filter driver, a data path for new data packets based on whether the notification specified a new data path (*paragraph [0054]*).

As in claims 5 and 37, McGowen discloses designating, with the filter driver, a first storage device stack as a primary storage device stack in response to building the first storage device stack for a logical unit (*paragraphs [0025] and [0038]-[0039], respective stacks associated with respective adapters*); and

designating, with the filter driver, a subsequent storage device stack as a secondary storage device stack in response to building the subsequent storage device stack for the logical unit (*paragraphs [0025] and [0038]-[0039]*).

As in claim 17, McGowen discloses a system coupled to a network and data storage (*Figs. 1-4*), comprising:

a host computer (*Figs. 1-4 #s 104/107*);

a storage controller managing Input/Output (I/O) access to the data storage (*Fig. 4 #301; paragraph [0031]*);

wherein the storage controller is coupled to the host computer (*Figs. 1-4; paragraphs [0022]-[0031]*);

a first network adapter (*Fig. 4; paragraphs [0030]-[0034]*);

a second network adapter (*Fig. 4; paragraphs [0030]-[0034]*); and

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a filter driver at the host computer (*paragraphs [0007] and [0038], multi-path SCSI class device driver*), wherein the filter driver is capable of:

receiving a path fail notification that at least one of the first network adapter and a data path through the first network adapter has failed and rerouting packets directed to the first network adapter to the second network adapter (*paragraphs [0007], [0034], [0054], and [0063]*).

As in claim 19, McGowen discloses determining a new data path including the second network adapter (*paragraphs [0006]-[0007] and [0063]-[0064]*).

As in claim 20, McGowen discloses receiving a notification that the first network adapter is restored (*paragraphs [0006]-[0007] and [0064]*); and

determining a data path for new data packets based on whether the notification specified a new data path (*paragraph [0054]*).

As in claim 21, McGowen discloses designating a first storage device stack as a primary storage device stack in response to building the first storage device stack for a logical unit (*paragraphs [0025] and [0038]-[0039], respective stacks associated with respective adapters*); and

designating a subsequent storage device stack as a secondary storage device stack in response to building the subsequent storage device stack for the logical unit (*paragraphs [0025] and [0038]-[0039]*).

\* \* \*

7. Claims 7-10, 23-26, and 39-42 are rejected under 35 U.S.C. 102(e) as being anticipated by Infante (U.S. PGPub 2004/0078632).

As in claims 7 and 39, Infante discloses a method and an article of manufacture for failover when at least one of a network adapter and a data path through the network adapter fails, wherein the network adapter is connected to a miniport driver that is connected to a filter driver (*Fig. 3; paragraphs [0028] and [0035]*), comprising:

determining, with the miniport driver, that the network adapter has failed (*paragraphs [0028], [0035], and [0044]*); and

notifying, with the miniport driver, the filter driver that the network adapter has failed (*paragraphs [0028], [0035], and [0044]*).

As in claims 8 and 40, Infante discloses specifying, with the miniport driver, a new data path to be used by the filter driver for rerouting packets (*paragraph [0035]*).

As in claims 9 and 41, Infante discloses completing, with the miniport driver, processing of pending packets directed to the first network adapter with a success status (*paragraphs [0035], [0069], [0074], and [0088]*).



As in claims 10 and 42, Infante discloses determining, with the miniport driver, that the network adapter is restored; and

notifying, with the miniport driver, the filter driver that the network adapter is restored (*paragraphs [0035], [0044], [0046], and [0088]*).

As in claim 23, Infante discloses a system coupled to a network and data storage (*Fig. 1*), comprising:

a host computer (*Fig. 1 #102*);

a storage controller managing Input/Output (I/O) access to the data storage, wherein the storage controller is coupled to the host computer (*Figs. 1-3*);

a filter driver at the host computer (*Fig. 1 #103*);

at least two network adapters at the host computer (*Fig. 1 #s 104/106/108*); and

a miniport driver at the host computer, wherein the miniport driver is capable of determining that at least one of the network adapters has failed and notifying the filter driver that the network adapter has failed (*Fig. 3 #s 308/310; paragraphs [0028], [0035], and [0044]*).

As in claim 24, Infante discloses specifying a new data path to be used by the filter driver for rerouting packets (*paragraph [0035]*).

As in claim 25, Infante discloses completing processing of pending packets directed to the first network adapter with a success status (*paragraphs [0035], [0069], [0074], and [0088]*).

As in claim 26, Infante discloses determining that the network adapter is restored; and

notifying, with the miniport driver, the filter driver that the network adapter is restored (*paragraphs [0035], [0044], [0046], and [0088]*).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2, 18, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGowen in view of Grun (U.S. PGPub 2004/0107304).

As in claims 2, 18, and 34, McGowen teaches of a filter driver, a network adapter, and a path fail notification. However, McGowen fails to teach of a packet busy status. Grun teaches of a busy packet status during failover of channel adapters (*paragraphs [0042] and [0132]*).

It would have been obvious to a person skilled in the art at the time the invention was made to have included the busy status as taught by Grun in the invention of McGowen. This would have been obvious because packets that are not yet committed to storage via a channel adapter as taught by Grun are held in a busy status until failover occurs in order to prevent a loss of data and ensure integrity of a storage system.

\* \* \*

9. Claims 6, 22, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGowen in view of Goodwin (U.S. PGPub 2005/0185789).

As in claim 6, 22, and 38, McGowen teaches of a filter driver and a secondary storage stack. However, McGowen fails to teach of preventing mounting of a file system. Goodwin teaches of preventing with a filter driver of a file system mounting on a storage device stack (*paragraph [0076]*).

It would have been obvious to a person skilled in the art at the time the invention was made to have included the prevention as taught by Goodwin the invention of McGowen. This would have been obvious because the invention of Goodwin allows for the full control over a storage system in determining the particulars of file access in order to provide for a most appropriate and efficient computing configuration (*paragraphs [0005] and [0074]-[0075]*).

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See included PTO-892.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL F. CONTINO whose telephone number is (571) 272-3657. The examiner can normally be reached on Monday-Friday 9:00 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571) 272-3644. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Paul F. Contino/  
8 December 2008  
Patent Examiner  
Art Unit 2114